

- 1 -

## SEQUENCE LISTING

&lt;110&gt; Duzic, Emir et al.

5 &lt;120&gt; AGS PROTEINS AND NUCLEIC ACID MOLECULES AND USES THEREOF

&lt;130&gt; CPI-086CPPC

&lt;140&gt;

10 &lt;141&gt;

&lt;160&gt; 72

&lt;170&gt; PatentIn Ver. 2.0

15

&lt;210&gt; 1

&lt;211&gt; 846

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1).. (843)

25 &lt;400&gt; 1

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Tyr	Ser	Ile	Arg	Gly	Glu	Val	Tyr	Gln	Leu	Asp	Ile	Leu	Asp	Thr	Ser	
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Gly	Asn	His	Pro	Phe	Pro	Ala	Met	Arg	Arg	Leu	Ser	Ile	Leu	Thr	Gly	
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gac	gtt	ttc	atc	ctg	gtg	ttc	agt	ctg	gac	aac	cgc	gac	tcc	ttc	gag	336
Asp	Val	Phe	Ile	Leu	Val	Phe	Ser	Leu	Asp	Asn	Arg	Asp	Ser	Phe	Glu	
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Glu	Val	Gln	Arg	Leu	Arg	Gln	Gln	Ile	Leu	Asp	Thr	Lys	Ser	Cys	Leu	
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Ile Val Ser Arg Phe Leu Thr Gly Arg Phe Glu Asp Ala Tyr Thr Pro  
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 Lys

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35 &lt;213&gt; Homo sapiens

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60 <210> 37  
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&lt;400&gt; 37

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&lt;210&gt; 38

&lt;211&gt; 32

10 &lt;212&gt; DNA

&lt;213&gt; Artificial sequence

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&lt;400&gt; 38

15 ccaaggacaa ggagcgcagc gtcacacagct ag 32

&lt;210&gt; 39

&lt;211&gt; 32

20 &lt;212&gt; DNA

&lt;213&gt; Artificial sequence

&lt;223&gt; Probe/Primer

&lt;400&gt; 39

25 ctagctgatg acgctgcgct ccttgctcctt gg 32

&lt;210&gt; 40

&lt;211&gt; 837

30 &lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

35 &lt;222&gt; (1)..(834)

&lt;400&gt; 40

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Met Pro Ala Ser Leu Ala Leu Leu Gln Pro Arg Ala Met Met Lys Thr  
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ttg tcc agc ggg aac tgc acg ctc agt gtg ccc gcc aaa aac tca tac 96  
Leu Ser Ser Gly Asn Cys Thr Leu Ser Val Pro Ala Lys Asn Ser Tyr  
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45 cgc atg gtg gtg ctg ggt gcc tct cgg gtg ggc aag agc tcc atc gtg 144  
Arg Met Val Val Leu Gly Ala Ser Arg Val Gly Lys Ser Ser Ile Val  
35 40 45

50 tct cgc ttc ctc aat ggc cgc ttt gag gac cag tac aca ccc acc atc 192  
Ser Arg Phe Leu Asn Gly Arg Phe Glu Asp Gln Tyr Thr Pro Thr Ile  
50 55 60

gag gac ttc cac cgt aag gta tac aac atc cgc ggc gac atg tac cag 240  
55 Glu Asp Phe His Arg Lys Val Tyr Asn Ile Arg Gly Asp Met Tyr Gln  
65 70 75 80

ctc gac atc ctg gat acc tct ggc aac cac ccc ttc ccc gcc atg cgc 288  
60 Leu Asp Ile Leu Asp Thr Ser Gly Asn His Pro Phe Pro Ala Met Arg  
85 90 95

agg ctg tcc atc ctc aca ggg gat gtc ttc atc ctg gtg ttc agc ctg 336

Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile Leu Val Phe Ser Leu  
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 gat aac cgg gag tcc ttc gat gag gtc aag cgc ctt cag aag cag atc 384  
 5 Asp Asn Arg Glu Ser Phe Asp Glu Val Lys Arg Leu Gln Lys Gln Ile  
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 10 Leu Glu Val Lys Ser Cys Leu Lys Asn Lys Thr Lys Glu Ala Ala Glu  
 130 135 140  
 ctg ccc atg gtc atc tgt ggc aac aag aac gac cac ggc gag ctg tgc 480  
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 Arg Gln Val Pro Thr Thr Glu Ala Glu Leu Leu Val Ser Gly Asp Glu  
 165 170 175  
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 25 Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu Pro His Glu Met  
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 30 Ser Pro Ala Leu His Arg Lys Ile Ser Val Gln Tyr Gly Asp Ala Phe  
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 cac ccc agg ccc ttc tgc atg cgc cgc gtc aag gag atg gac gcc tat 720  
 His Pro Arg Pro Phe Cys Met Arg Arg Val Lys Glu Met Asp Ala Tyr  
 225 230 235 240  
 35 ggc atg gtc tcg ccc ttc gcc cgc cgc ccc agc gtc aac agt gac ctc 768  
 Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val Asn Ser Asp Leu  
 245 250 255  
 40 aag tac atc aag gcc aag gtc ctt cgg gaa ggc cag gcc cgt gag agg 816  
 Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln Ala Arg Glu Arg  
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 35 40 45

Ser Arg Phe Leu Asn Gly Arg Phe Glu Asp Gln Tyr Thr Pro Thr Ile  
 50 55 60  
 5 Glu Asp Phe His Arg Lys Val Tyr Asn Ile Arg Gly Asp Met Tyr Gln  
 65 70 75 80  
 Leu Asp Ile Leu Asp Thr Ser Gly Asn His Pro Phe Pro Ala Met Arg  
 85 90 95  
 10 Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile ~~Ile~~ Leu Val Phe Ser Leu  
 100 105 110  
 Asp Asn Arg Glu Ser Phe Asp Glu Val Lys Arg Leu Gln Lys Gln Ile  
 115 120 125  
 Leu Glu Val Lys Ser Cys Leu Lys Asn Lys Thr Lys Glu Ala Ala Glu  
 130 135 140  
 20 Leu Pro Met Val Ile Cys Gly Asn Lys Asn Asp His Gly Glu Leu Cys  
 145 150 155 160  
 Arg Gln Val Pro Thr Thr Glu Ala Glu Leu Leu Val Ser Gly Asp Glu  
 165 170 175  
 25 Asn Cys Ala Tyr Phe Glu Val Ser Ala Lys Lys Asn Thr Asn Val Asp  
 180 185 190  
 Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu Pro His Glu Met  
 195 200 205  
 Ser Pro Ala Leu His Arg Lys Ile Ser Val Gln Tyr Gly Asp Ala Phe  
 210 215 220  
 35 His Pro Arg Pro Phe Cys Met Arg Arg Val Lys Glu Met Asp Ala Tyr  
 225 230 235 240  
 Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val Asn Ser Asp Leu  
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30 cccgccctcg cggccccctct gccca atg aaa ctg gcc gcg atg atc aag aag 172  
 Met Lys Leu Ala Ala Met Ile Lys Lys  
 1 5

35 atg tgc ccg agc gac tcg gag ctg agt atc ccg gcc aag aac tgc tat 220  
 Met Cys Pro Ser Asp Ser Glu Leu Ser Ile Pro Ala Lys Asn Cys Tyr  
 10 15 20 25

40 cgc atg gtc atc ctc ggc tcg tcc aag gtg ggc aag acg gcc atc gtg 268  
 Arg Met Val Ile Leu Gly Ser Ser Lys Val Gly Lys Thr Ala Ile Val  
 30 35 40

45 tcg cgc ttc ctc acc ggc cgc ttc gag gac gcc tac acg cct acc atc 316  
 Ser Arg Phe Leu Thr Gly Arg Phe Glu Asp Ala Tyr Thr Pro Thr Ile  
 45 50 55

50 gag gac ttc cac cgc aag ttc tac tcc atc cgc ggc gag gtc tac cag 364  
 Glu Asp Phe His Arg Lys Phe Tyr Ser Ile Arg Gly Glu Val Tyr Gln  
 60 65 70

55 ctc gac atc ctc gac acg tcc ggc aac cac ccg ttc ccc gcc atg ccg 412  
 Leu Asp Ile Leu Asp Thr Ser Gly Asn His Pro Phe Pro Ala Met Arg  
 75 80 85

60 cgc ctc tcc atc ctc aca gga gac gtt ttc atc ctg gtg ttc agt ctg 460  
 Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile Leu Val Phe Ser Leu  
 90 95 100 105

65 gac aac cgc gac tcc ttc gag gag gtg cag cgg ctc agg cag cag atc 508  
 Asp Asn Arg Asp Ser Phe Glu Glu Val Gln Arg Leu Arg Gln Gln Ile  
 110 115 120

ctc gac acc aag tct tgc ctc aag aac aaa acc aag gag aac gtg gac 556



Leu Asp Thr Lys Ser Cys Leu Lys Asn Lys Thr Lys Glu Asn Val Asp  
 125 130 135

5   gtg ccc ctg gtc atc tgc ggc aac aag ggt gac cgc gac ttc tac cgc 604  
     Val Pro Leu Val Ile Cys Gly Asn Lys Gly Asp Arg Asp Phe Tyr Arg  
         140 145 150

10   gag gtg gac cag cgc gag atc gag cag ctg gtg ggc gac gac ccc cag 652  
     Glu Val Asp Gln Arg Glu Ile Glu Gln Leu Val Gly Asp Asp Pro Gln  
         155 160 165

15   cgc tgc gcc tac ttc gag atc tgc gcc aag aac agc agc ctg gac 700  
     Arg Cys Ala Tyr Phe Glu Ile Ser Ala Lys Lys Asn Ser Ser Leu Asp  
         170 175 180 185

20   cag atg ttc cgc gcg ctc ttc gcc atg gcc aag ctg ccc agc gag atg 748  
     Gln Met Phe Arg Ala Leu Phe Ala Met Lys Leu Pro Ser Glu Met  
         190 195 200

25   agc cca gac ctg cac cgc aag gtc tgc gtg cag tac tgc gac gtg ctg 796  
     Ser Pro Asp Leu His Arg Lys Val Ser Val Gln Tyr Cys Asp Val Leu  
         205 210 215

30   cac aag aag gcg ctg cgg aac aag aag ctg ctg cgg gcc ggc agc ggc 844  
     His Lys Lys Ala Leu Arg Asn Lys Lys Leu Leu Arg Ala Gly Ser Gly  
         220 225 230

35   ggc ggc ggc ggc gac ccg ggc gac gcc ttt ggc atc gtg gca ccc ttc 892  
     Gly Gly Gly Gly Asp Pro Gly Asp Ala Phe Gly Ile Val Ala Pro Phe  
         235 240 245

40   gcg cgc cgg ccc agc gta cac agc gac ctc atg tac atc cgc gag aag 940  
     Ala Arg Arg Pro Ser Val His Ser Asp Leu Met Tyr Ile Arg Glu Lys  
         250 255 260 265

45   gcc agc gcc ggc agc cag gcc aag gac aag gag cgc tgc gtc atc agc 988  
     Ala Ser Ala Gly Ser Gln Ala Lys Asp Lys Glu Arg Cys Val Ile Ser  
         270 275 280

50   taggagcccc gccgcgctgg cgacacaacc taaggaggac ctttttgtta agtcaaattcc 1048  
     aacggccccg tgcgccccag gccgggagcg cgcgcggact ggcgtctccc ctcccggcga 1108  
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1740

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 20 25 30

Ser Lys Val Gly Lys Thr Ala Ile Val Ser Arg Phe Leu Thr Gly Arg  
 35 40 45

20 Phe Glu Asp Ala Tyr Thr Pro Thr Ile Glu Asp Phe His Arg Lys Phe  
 50 55 60

Tyr Ser Ile Arg Gly Glu Val Tyr Gln Leu Asp Ile Leu Asp Thr Ser  
 65 70 75 80

25 Gly Asn His Pro Phe Pro Ala Met Arg Arg Leu Ser Ile Leu Thr Gly  
 85 90 95

30 Asp Val Phe Ile Leu Val Phe Ser Leu Asp Asn Arg Asp Ser Phe Glu  
 100 105 110

Glu Val Gln Arg Leu Arg Gln Gln Ile Leu Asp Thr Lys Ser Cys Leu  
 115 120 125

35 Lys Asn Lys Thr Lys Glu Asn Val Asp Val Pro Leu Val Ile Cys Gly  
 130 135 140

40 Asn Lys Gly Asp Arg Asp Phe Tyr Arg Glu Val Asp Gln Arg Glu Ile  
 145 150 155 160

Glu Gln Leu Val Gly Asp Asp Pro Gln Arg Cys Ala Tyr Phe Glu Ile  
 165 170 175

45 Ser Ala Lys Lys Asn Ser Ser Leu Asp Gln Met Phe Arg Ala Leu Phe  
 180 185 190

Ala Met Ala Lys Leu Pro Ser Glu Met Ser Pro Asp Leu His Arg Lys  
 195 200 205

50 Val Ser Val Gln Tyr Cys Asp Val Leu His Lys Lys Ala Leu Arg Asn  
 210 215 220

Lys Lys Leu Leu Arg Ala Gly Ser Gly Gly Gly Gly Asp Pro Gly  
 225 230 235 240

55 Asp Ala Phe Gly Ile Val Ala Pro Phe Ala Arg Arg Pro Ser Val His  
 245 250 255

60 Ser Asp Leu Met Tyr Ile Arg Glu Lys Ala Ser Ala Gly Ser Gln Ala  
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Lys Asp Lys Glu Arg Cys Val Ile Ser

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280

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 15 Asp Pro Thr Ile Glu Asp Ser Tyr Arg Lys Gln Val Val Ile Asp Gly  
 35 40 45  
 Glu Thr Cys Leu Leu Asp Ile Leu Asp Thr Ala Gly Gln Glu Glu Tyr  
 50 55 60  
 20 Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu Gly Phe Leu Cys  
 65 70 75 80  
 Val Phe Ala Ile Asn Asn Thr Lys Ser Phe Glu Asp Ile His Gln Tyr  
 25 85 90 95  
 Arg Glu Gln Ile Lys Arg Val Lys Asp Ser Asp Asp Val Pro Met Val  
 100 105 110  
 30 Leu Val Gly Asn Lys Cys Asp Leu Ala Ala Arg Thr Val Glu Ser Arg  
 115 120 125  
 Gln Ala Gln Asp Leu Ala Arg Ser Tyr Gly Ile Pro Tyr Ile Glu Thr  
 130 135 140  
 35 Ser Ala Lys Thr Arg Gln Gly Val Glu Asp Ala Phe Tyr Thr Leu Val  
 145 150 155 160  
 Arg Glu Ile Arg Gln His Lys Leu Arg Lys Leu Asn Pro Pro Asp Glu  
 40 165 170 175  
 Ser Gly Pro Gly Cys Met Ser Cys Lys Cys Val Leu Ser  
 180 185

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 <211> 206  
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 Gln Phe Met Tyr Asp Glu Phe Val Glu Asp Tyr Glu Pro Thr Lys Ala  
 35 40 45  
 60 Asp Ser Tyr Arg Lys Lys Val Leu Asp Gly Glu Glu Val Gln Ile  
 50 55 60

Asp Ile Leu Asp Thr Ala Gly Gln Glu Asp Tyr Ala Ala Ile Arg Asp  
 65 70 75 80

5 Asn Tyr Phe Arg Ser Gly Glu Gly Phe Leu Cys Val Phe Ser Ile Thr  
 85 90 95

Glu Met Glu Ser Phe Ala Ala Thr Ala Asp Phe Arg Glu Gln Ile Leu  
 100 105 110

10 Arg Val Lys Glu Asp Glu Asn Val Pro Phe ~~Leu~~ Leu Val Gly Asn Lys  
 115 120 125

Ser Asp Leu Glu Asp Lys Arg Gln Val Ser Val Glu Glu Ala Lys Asn  
 15 130 135 140

Arg Ala Glu Gln Trp Asn Val Asn Tyr Val Glu Thr Ser Ala Lys Thr  
 145 150 155 160

20 Arg Ala Asn Val Asp Lys Val Phe Phe Asp Leu Met Arg Glu Ile Arg  
 165 170 175

Ala Arg Lys Met Glu Asp Ser Lys Glu Lys Asn Gly Lys Lys Lys Arg  
 180 185 190

25 Lys Ser Leu Ala Lys Arg Ile Arg Glu Arg Cys Cys Ile Leu  
 195 200 205

30 <210> 49  
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40 Ile Gly Asp Ser Gly Val Gly Lys Ser Cys Leu Leu Leu Arg Phe Ala  
 20 25 30

Asp Asp Thr Tyr Thr Glu Ser Tyr Ile Ser Thr Ile Gly Val Asp Phe  
 35 40 45

45 Lys Ile Arg Thr Ile Glu Leu Asp Gly Lys Thr Ile Lys Leu Gln Ile  
 50 55 60

Trp Asp Thr Ala Gly Gln Glu Arg Phe Arg Thr Ile Thr Ser Ser Tyr  
 65 70 75 80

50 Tyr Arg Gly Ala His Gly Ile Ile Val Val Tyr Asp Val Thr Asp Gln  
 85 90 95

Glu Ser Phe Asn Asn Val Lys Gln Trp Leu Gln Glu Ile Asp Arg Tyr  
 55 100 105 110

Ala Ser Glu Asn Val Asn Lys Leu Leu Val Gly Asn Lys Cys Asp Leu  
 115 120 125

60 Thr Thr Lys Lys Val Val Asp Tyr Thr Thr Ala Lys Glu Phe Ala Asp  
 130 135 140

Ser Leu Gly Ile Pro Phe Leu Glu Thr Ser Ala Lys Asn Ala Thr Asn  
 145 150 155 160  
 Val Glu Gln Ser Phe Met Thr Met Ala Ala Glu Ile Lys Lys Arg Met  
 5 165 170 175  
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 20 25 30  
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 35 40 45  
 Thr Val Phe Glu Arg Tyr Met Val Asn Leu Gln Val Lys Gly Lys Pro  
 30 50 55 60  
 Val His Leu His Ile Trp Asp Thr Ala Gly Gln Asp Asp Tyr Asp Arg  
 65 70 75 80  
 35 Leu Arg Pro Leu Phe Tyr Pro Asp Ala Ser Val Leu Leu Leu Cys Phe  
 85 90 95  
 Asp Val Thr Ser Pro Asn Ser Phe Asp Asn Ile Phe Asn Arg Trp Tyr  
 100 105 110  
 40 Pro Glu Val Asn His Phe Cys Lys Lys Val Pro Ile Ile Val Val Gly  
 115 120 125  
 Cys Lys Thr Asp Leu Arg Lys Asp Lys Ser Leu Val Asn Lys Leu Arg  
 45 130 135 140  
 Arg Asn Gly Leu Glu Pro Val Thr Tyr His Arg Gly Gln Glu Met Ala  
 145 150 155 160  
 50 Arg Ser Val Gly Ala Val Ala Tyr Leu Glu Cys Ser Ala Arg Leu His  
 165 170 175  
 Asp Asn Val His Ala Val Phe Gln Glu Ala Ala Glu Val Ala Leu Ser  
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 Val Thr  
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 35 40 45

15

Glu Pro Tyr Thr Leu Gly Leu Phe Asp Thr Ala Gly Gln Glu Asp Tyr  
 50 55 60

20 Asp Arg Leu Arg Pro Leu Ser Tyr Pro Gln Thr Asp Val Phe Leu Val  
 65 70 75 80

Cys Phe Ser Val Val Ser Pro Ser Ser Phe Glu Asn Val Lys Glu Lys  
 85 90 95

25 Trp Val Pro Glu Ile Thr His His Cys Pro Lys Thr Pro Phe Leu Leu  
 100 105 110

Val Gly Thr Gln Ile Asp Leu Arg Asp Asp Pro Ser Thr Ile Glu Lys  
 115 120 125

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Leu Ala Lys Asn Lys Gln Lys Pro Ile Thr Pro Glu Thr Ala Glu Lys  
 130 135 140

35 Leu Ala Arg Asp Leu Lys Ala Val Lys Tyr Val Glu Cys Ser Ala Leu  
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40 Leu Glu Pro Pro Glu Thr Gln Pro Lys Arg Lys Cys Cys Ile Phe  
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Ile Pro Thr Val Phe Asp Asn Tyr Ser Ala Asn Val Met Val Asp Ser  
 35 40 45

60 Lys Pro Val Asn Leu Gly Leu Trp Asp Thr Ala Gly Gln Glu Asp Tyr  
 50 55 60

Asp Arg Leu Arg Pro Leu Ser Tyr Pro Gln Thr Asp Val Phe Leu Ile

65                      70                      75                      80  
 Cys Phe Ser Leu Val Ser Pro Ala Ser Tyr Glu Asn Val Arg Ala Lys  
                                  85                      90                      95  
 5 Trp Phe Pro Glu Val Arg His His Cys Pro Ser Thr Pro Ile Ile Leu  
                                  100                      105                      110  
 Val Gly Thr Lys Leu Asp Leu Arg Asp Asp Lys Asp Thr Ile Glu Lys  
 10                      115                      120                      125  
 Leu Lys Glu Lys Lys Leu Ala Pro Ile Thr Tyr Pro Gln Gly Leu Ala  
                                  130                      135                      140  
 15 Leu Ala Lys Glu Ile Asp Ser Val Lys Tyr Leu Glu Cys Ser Ala Leu  
                                  145                      150                      155                      160  
 Thr Gln Arg Gly Leu Lys Thr Val Phe Asp Glu Ala Ile Arg Ala Val  
                                  165                      170                      175  
 20 Leu Cys Pro Gln Pro Thr Arg Gln Gln Lys Arg Ala Cys Ser Leu Leu  
                                  180                      185                      190  
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                                  20                      25                      30  
 40 Ile Leu Tyr Arg Leu Gln Val Gly Glu Val Val Thr Thr Ile Pro Thr  
                                  35                      40                      45  
 Ile Gly Phe Asn Val Glu Thr Val Thr Tyr Lys Asn Leu Lys Phe Gln  
                                  50                      55                      60  
 45 Val Trp Asp Leu Gly Gly Gln Thr Ser Ile Arg Pro Tyr Trp Arg Cys  
                                  65                      70                      75                      80  
 Tyr Tyr Ser Asn Thr Asp Ala Val Ile Tyr Val Val Asp Ser Cys Asp  
 50                      85                      90                      95  
 Arg Asp Arg Ile Gly Ile Ser Lys Ser Glu Leu Val Ala Met Leu Glu  
                                  100                      105                      110  
 55 Glu Glu Glu Leu Arg Lys Ala Ile Leu Val Val Phe Ala Asn Lys Gln  
                                  115                      120                      125  
 Asp Met Glu Gln Ala Met Thr Ser Ser Glu Met Ala Asn Ser Leu Gly  
                                  130                      135                      140  
 60 Leu Pro Ala Leu Lys Asp Arg Lys Trp Gln Ile Phe Lys Thr Ser Ala  
                                  145                      150                      155                      160

Thr Lys Gly Thr Gly Leu Asp Glu Ala Met Glu Trp Leu Val Glu Thr  
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5 Leu Lys Ser Arg Gln  
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 35 40 45

Phe Glu Ile Asp Thr Gln Arg Ile Glu Leu Ser Leu Trp Asp Thr Ser  
 25 50 55 60

Gly Ser Pro Tyr Tyr Asp Asn Val Arg Pro Leu Ser Tyr Pro Asp Ser  
 65 70 75 80

30 Asp Ala Val Leu Ile Cys Phe Asp Ile Ser Arg Pro Glu Thr Leu Asp  
 85 90 95

Ser Val Leu Lys Lys Trp Lys Gly Glu Ile Gln Glu Phe Cys Pro Asn  
 100 105 110

35 Thr Lys Met Leu Leu Val Gly Cys Lys Ser Asp Leu Arg Thr Asp Val  
 115 120 125

Ser Thr Leu Val Glu Leu Ser Asn His Arg Gln Thr Pro Val Ser Tyr  
 40 130 135 140

Asp Gln Gly Ala Asn Met Ala Lys Gln Ile Gly Ala Ala Thr Tyr Ile  
 145 150 155 160

45 Glu Cys Ser Ala Leu Gln Ser Glu Asn Ser Val Arg Asp Ile Phe His  
 165 170 175

Val Ala Thr Leu Ala Cys Val Asn Lys Thr Asn Lys Asn Val Lys Arg  
 180 185 190

50 Asn Lys Ser Gln Arg Ala Thr Lys Arg Ile Ser His Met Pro Ser Arg  
 195 200 205

Pro Glu Leu Ser Ala Val Ala Thr Asp Leu Arg Lys Asp Lys Ala Lys  
 55 210 215 220

Ser Cys Thr Val Met  
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[illegible]

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